

Application N .: 09/701,226
Amendment dated: June 25, 2003
Reply to Office Action of: April 8, 2003

MAT-8026US

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A brushless motor comprising:

a rotor with a permanent magnet having P (P is an integer not less than two) polarities, ~~the permanent magnet polarities having a polarity angle of $360/P$ degrees, and,~~

wherein two extension lines, which extend toward a shaft center of said rotor along both ends of each magnetic polarity of said rotor, form an angle with respect to the shaft center of said rotor; and

a stator facing said rotor and having a plurality of coils,

wherein any one of the coils has winding-bundles including isosceles sides interlinking with a magnetic field generated by the magnetic polarities, extension lines of the isosceles sides extending along centers of winding bundles of the coil, crossing each other at a shaft center and having a vertex angle of $360/P$ degree, the vertex angle being equal to the polarity angle of $360/P$ degrees based on the permanent magnet.

wherein two extension lines extending along centers of the winding-bundles of the isosceles sides of the coil cross each other at the shaft center of said rotor and form a vertex angle of $360/P$ degrees, and

wherein the vertex angle formed by the two extension lines extending along centers of the winding bundles is equal to the angle formed by the two extension lines extending along both ends of the each magnetic polarity of said rotor.

2. (Original) The brushless motor as defined in Claim 1, wherein an outer rim of the coil measures not more than $\phi 40$ mm.

3. (Original) The brushless motor as defined in Claim 1, wherein the coil winding-bundles forming the isosceles sides are disposed within an area covered by

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an angle of $360/(4 \times P)$ degree both inside and outside with respect to a center of the angle of $360/P$ degree.

4. (Previously Amended) The brushless motor as defined in Claim 3, wherein the coils adjacent to each other are spaced out at intervals of $(360/P) \times (5/3)$ degree.

5. (Original) The brushless motor as defined in Claim 4 further comprising three position detectors for detecting a position of said rotor, wherein said detectors are placed at intervals of $(360/P) \times (2/3)$ degree and in an area where the coils are not placed.